CLAIMS

What is claimed is:

1.   A system for processing a call having call signaling and user communications, the system comprising:

a signaling processor adapted to receive the call signaling, to process the call signaling, to determine an allocated bandwidth for the user

5   communications, and to transmit a control message identifying the allocated bandwidth; and

a connection system adapted to receive the user communications, to receive the control message, and to connect the user communications according to the allocated bandwidth identified in the control

10   message.

2.   The system of claim 1 wherein:

the signaling processor further is adapted to determine an encoding scheme for the user communications and to communicate the encoding scheme to the connection system; and

5   the connection system further is adapted to encode the user communications according to the encoding scheme communicated by the signaling processor.

3.   The system of claim 2 wherein the encoding scheme comprises compression.

4.   The system of claim 2 wherein the encoding scheme comprises encryption.

5. The system of claim 1 wherein:

the signaling processor further is adapted to determine a decoding scheme for the user communications and to communicate the decoding scheme to the connection system; and

the connection system further is adapted to decode the user communications according to the decoding scheme communicated by the signaling processor.

6. The system of claim 5 wherein the decoding scheme comprises decompression.

7. The system of claim 5 wherein the decoding scheme comprises decryption.

8. The system of claim 1 wherein the signaling processor is adapted to determine the allocated bandwidth based upon a control feature.

9. The system of claim 8 wherein the control feature comprises a call admission control method.

10. The system of claim 8 wherein the control feature comprises quality of service.

11. The system of claim 8 wherein the control feature comprises a type of call.

12. The system of claim 11 wherein the type of call comprises a voice call.

13. The system of claim 11 wherein the type of call comprises a data call.

14. The system of claim 13 wherein the data call comprises a clear channel call.

15. The system of claim 11 wherein the type of call comprises a facsimile call.

16. The system of claim 8 wherein the control feature comprises a subscriber profile.

17. The system of claim 8 wherein the control feature comprises an automatic number identifier.

18. The system of claim 8 wherein the control feature comprises an accounting package for the call.

19. The system of claim 8 wherein the control feature comprises information received in the user communications.

20. The system of claim 19 wherein the information received in the user communications comprises a call trigger.

21. The system of claim 19 wherein the information received in the user communications comprises a modem tone.

22. The system of claim 1 further comprising an accounting system and wherein:

the signaling processor further is adapted to transmit call accounting information; and

5　the accounting system is adapted to receive call accounting information from the signaling processor and to process the call accounting information to determine a rate for the call.

23. The system of claim 22 wherein the rate is determined using a type of the call.

24. The system of claim 22 wherein the rate is determined using a subscriber profile.

25. The system of claim 22 wherein the rate is determined using a level of the allocated bandwidth.

26. The system of claim 22 wherein the rate is determined using an accounting rate structure.

27. The system of claim 1 wherein:

the signaling processor is adapted to select a connection and to designate the selected connection in the control message; and

the connection system comprises an interworking unit adapted to receive

5　the user communications, to receive the control message, and to interwork the user communications over the connection designated by the signaling processor according to the allocated bandwidth.

28. The system of claim 27 wherein:

the signaling processor is adapted to select a second connection and to designate the selected second connection in a second control message; and

the connection system comprises an asynchronous transfer mode matrix adapted to receive the user communications, to receive the second control message, and to connect the user communications over the selected second connection designated by the signaling processor.

29. The system of claim 1 wherein:

the signaling processor is adapted to select a connection and to designate the selected connection in the control message; and

the connection system comprises an asynchronous transfer mode matrix adapted to receive the user communications, to receive the control message, and to connect the user communications over the connection designated by the signaling processor.

30. The system of claim 1 wherein the signaling processor further is adapted to transmit new call signaling.

31. The system of claim 30 further comprising a communication device adapted to receive the new call signaling.

32. The system of claim 32 wherein the communication device comprises a switch.

33. The system of claim 1 further comprising a communication device adapted to transmit the call signaling.

34. The system of claim 33 wherein the communication device comprises a switch.

35.   A method for processing a call having call signaling and user communications, the method comprising:

receiving the call signaling and processing the call signaling;

determining an allocated bandwidth for the user communications;

transmitting a control message identifying the allocated bandwidth;

receiving the user communications and receiving the control message; and

connecting the user communications according to the allocated bandwidth
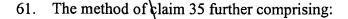
identified in the control message.

36.   The method of claim 35 further comprising:

determining an encoding scheme for the user communications; and

encoding the user communications according to the encoding scheme.

37.   The method of claim 35 wherein the encoding scheme comprises compression.

38.   The method of claim 35 wherein the encoding scheme comprises encryption.

39.   The method of claim 35 further comprising:

determining a decoding scheme for the user communications; and

decoding the user communications according to the decoding scheme.

40.   The method of claim 39 wherein the decoding scheme comprises decompression.

41.   The method of claim 39 wherein the decoding scheme comprises decryption.

42. The method of claim 35 further comprising determining the allocated bandwidth based upon a control feature.

43. The method of claim 42 wherein the control feature comprises a call admission control method.

44. The method of claim 42 wherein the control feature comprises quality of service.

45. The method of claim 42 wherein the control feature comprises a type of call.

46. The method of claim 45 wherein the type of call comprises a voice call.

47. The method of claim 45 wherein the type of call comprises a data call.

48. The method of claim 47 wherein the data call comprises a clear channel call.

49. The method of claim 45 wherein the type of call comprises a facsimile call.

50. The method of claim 42 wherein the control feature comprises a subscriber profile.

51. The method of claim 42 wherein the control feature comprises an automatic number identifier.

52. The method of claim 42 wherein the control feature comprises an accounting package for the call.

53. The method of claim 42 wherein the control feature comprises information received in the user communications.

54. The method of claim 53 wherein the information received in the user communications comprises a call trigger.

55. The method of claim 53 wherein the information received in the user communications comprises a modem tone.

56. The method of claim 35 further comprising:

transmitting call accounting information; and

receiving the call accounting information and processing the call accounting information to determine a rate for the call.

57. The method of claim 56 further comprising determining the rate using a type of the call.

58. The method of claim 56 further comprising determining the rate using a subscriber profile.

59. The method of claim 56 further comprising determining the rate using a level of the allocated bandwidth.

60. The method of claim 56 further comprising determining the rate using an accounting rate structure.

61. The method of claim 35 further comprising:

selecting a connection and designating the selected connection in the control message;

receiving the user communications and receiving the control message; and

5   interworking the user communications over the connection designated in the control message according to the allocated bandwidth.

62. The method of claim 61 further comprising:

selecting a second connection and designating the selected second connection in a second control message;

receiving the user communications and receiving the second control

5   message; and

connecting the user communications over the selected second connection designated in the second control message.

63. The method of claim 35 further comprising:

selecting a connection and designating the selected connection in the control message;

receiving the user communications and receiving the control message; and

5   connecting the user communications over the connection designated in the control message.

64. The method of claim 35 further comprising transmitting new call signaling.

65. The method of claim 64 further comprising receiving the new call signaling at a communication device.

66. The method of claim 65 wherein the communication device comprises a switch.

67. The method of claim 35 further comprising transmitting the call signaling from a communication device.

68. The method of claim 67 wherein the communication device comprises a switch.

69.   A system for processing a call having call signaling and user communications, the system comprising:

a signaling processor adapted to receive the call signaling, to process the call signaling to select a connection for the user communications, and to transmit a control message identifying the selected connection; and

a connection system adapted to receive the control message, to receive the user communications, to detect a control feature in the user communications, and to connect the user communications over the selected connection according to an allocated bandwidth.

70.   The system of claim 69 wherein the control feature comprises a call trigger.

71.   The system of claim 69 wherein the control feature comprises a modem tone.

72.   The system of claim 69 wherein the connection system comprises an interworking unit adapted to interwork the user communications over the connection.

73.   The system of claim 69 wherein the connection system comprises an asynchronous transfer mode matrix adapted to connect the user communications over the connection.

74.   The system of claim 69 wherein the allocated bandwidth is pre-configured at a bandwidth level.

75. A method for processing a call having call signaling and user communications, the method comprising:

receiving the call signaling and processing the call signaling to select a connection for the user communications;

transmitting a control message identifying the selected connection;

receiving the control message and receiving the user communications;

detecting a control feature in the user communications; and

connecting the user communications over the selected connection according to an allocated bandwidth.

76. The method of claim 75 wherein the control feature comprises a call trigger.

77. The method of claim 75 wherein the control feature comprises a modem tone.

78. The method of claim 75 wherein the connecting comprises interworking the user communications over the connection.

79. The method of claim 75 wherein the connecting comprises connecting the user communications over the connection from an asynchronous transfer mode connection.

80. The method of claim 75 further comprising pre-configuring a bandwidth level for the allocated bandwidth.